

REMARKS

Claims 1-4 are pending. Claims 1, 3, and 4 are amended. No new matter is presented.

Claims 1 and 2 are rejected under 35 USC 102(c) as unpatentable over JP '610. This rejection is respectfully traversed.

Claim 1 recites at least two passages at a forward end of the spindle that are configured for maintenance of the claimed spindle unit. Spindles are used in a variety of tools that perform high-rpm (revolutions per minute) machining. The tools may be used for boring holes in wood or metal, for example. The claimed spindle unit is now configured so that old, or used, lubricating oil from the claimed oil chamber can be exchanged with greater ease than the lubricating oil used in JP '610's invention. Thus, applicants positively recite two passages leading from the outside, both passages being at a forward end of the spindle.

The reference fails to disclose these claimed passages. Instead, JP '610 only discloses "a seal means to enclose lubricant in a long hole." (See JP '610, paragraph [0024].) JP '610 specifies "sealing," language that entails fixing something closed, or, in this case, preventing leakage of lubricant. Thus, JP '610 fails to disclose a configuration for opening and closing the "long hole 28" so that the device can be maintained (see JP '610, paragraph [0024]). However, the long life of a spindle unit depends upon such maintenance. That is, the ability of a machinist, for example, to add new lubricating oil when the oil becomes gritty with metallic flakes or too thick to provide sufficient lubrication between metal parts of the claimed invention (see specification, page 8, lines 13-16).

At very high revolutions per minute, a spindle unit can become damaged quickly. These conditions require consistent application of lubricating oil. In view of this, applicants' specification explains that the "at least two claimed passages" leading from the outside can communicate easily with the inner chamber because of the claimed inner threads, which allow removal of the screw plugs. "The screw plug 67 is removed from the lubricating oil passage 51 arranged on the lower side, after which the screw plug 67 is removed from the air passage 63.

Once the screw plug 67 is removed from the air passage 63, the old lubricating oil is discharged from the lubricating oil passage 61 while air is sucked through the air passage 63.” (See specification, lines 21-28.) The claimed inner threads allow the screw plugs to be removed and reinserted (see specification, page 9, lines 4-8). Thus, one of the claimed passages leading from the outside of the spindle is “communicating” with the claimed oil pool chamber, meaning that the old lubricating oil is sucked out of a claimed passage and discarded (see specification, page 9, lines 25-28). By the same token, new lubricating oil can be added to the claimed oil pool chamber through at least one of the claimed passages (see specification, page 9, lines 28-29). Since the passages as claimed are not disclosed, all of the elements are not shown. Therefore, the rejection under 35 USC 102(c) should be withdrawn. Accordingly, claim 1 is allowable.

Claim 2 depends from claim 1. Therefore, claim 2 is allowable at least due to its dependency from claim 1.

Claims 3 and 4 stand rejected under 35 USC 103(a) as unpatentable over JP '610 in view of Yonezawa, U.S. Patent No. 5,125,234. This rejection is respectfully traversed.

As stated above, JP '610 fails to disclose the elements for which the Examiner has asserted it. Likewise, Yonezawa fails to disclose the elements of the claimed invention. The claimed spindle unit is allows for changing the lubricating oil in the oil pool chamber. Yonezawa, in contrast, is drawn to *sealing off* the apparatus from “foreign substances, such as sealing tape, dust, rust and the like from entering the apparatus at the time of manufacturing and overhaul maintenance” (see Yonezawa, col. 9, lines 58-63). Therefore, instead of allowing for oil to be sucked out, oil is kept inside the device of Yonezawa. Further, Yonezawa discloses that its configuration reduces the amount of piping needed to make the device and thereby also eliminates some of the loosened fittings caused by the pressure of pipes expanding and contracting (see Yonezawa, col. 2, lines 54-57 and col. 9, lines 58-63). Finally, the valve disclosed in Yonezawa operates when the device is in a “contracted condition” (see col. 3, line 15). That is, when the shut-off valve 49 is opened, excess oil travels from the oil make-up

chamber 48 to the plunger chamber 39. Thus, the valve configuration in Yonezawa enhances machine performance, and not the ability to maintain the claimed spindle unit. The claims must be read in light of the applicants' specification. Accordingly, the configuration disclosed in Yonezawa does not disclose a configuration concerned with maintenance of the spindle unit as claimed.

Neither JP '610 nor Yonezawa, nor any combination thereof, discloses at least two passages having inner threads, each of which is formed at the forward end of the spindle. Thus, the rejection under 35 USC 103(a) should be withdrawn. Accordingly, claims 3 and 4 are allowable.

In view of the above, each of the claims in this application is in condition for allowance. Accordingly, applicants solicit early action in the form of a Notice of Allowance.

In the event that the transmittal letter is separated from this document and the Patent and Trademark Office determines that an extension and/or other relief is required, applicants petition for any required relief including extensions of time and authorize the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing Docket No. **350292002700**.

Respectfully submitted,

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